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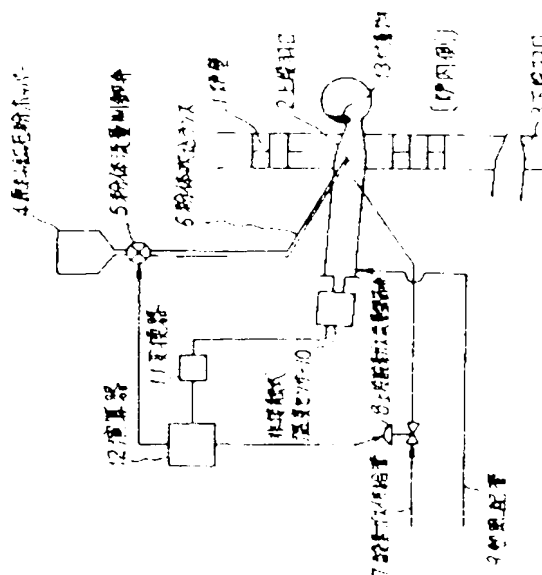
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APPLICANT : KAWASAKI STEEL CORP;

INVENTOR : USHIJIMA TAKASHI;

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TITLE : METHOD FOR REMOVING STICKING MATERIAL AT CIRCUMFERENCE OF TUYERE IN SMELTING REDUCTION FURNACE



ABSTRACT : PURPOSE: To melt and remove sticking material in a tuyere and to execute stable operation in a smelting reduction furnace by adjusting blast oxygen concn. from tuyeres at upper and lower steps and powdery ore blowing rate from the tuyere at the upper step at the time of judging the development of the material sticking around the tuyere at the upper step with a non-contacting type temp. sensor.

CONSTITUTION: Packing layer of the carbonaceous solid reducing material is constantly formed at least at lower part in the smelting reduction furnace, and the powdery ore is supplied in the furnace from the tuyeres 2, 3 at upper and lower two steps arranged at circumference of the furnace to manufacture the molten metal. In this operation, by arranging the non- contacting type temp. sensor 10 at rear part of the tuyere 2 at the upper step, radiation from the inner part of the tuyere 2 is detected to measure the temp., and the measured temp. is changed to an electric signal with the converter 11, and by judging the sticking degree of the powder with a computing element 12, the suitable oxygen gas blowing rate and powder supplying rate at the upper step are calculated. By this method, the blowing oxygen concn. from the tuyeres 2, 3 at upper and lower steps and/or the powdery ore blowing rate from the tuyere 2 at the upper step are adjusted to melt and remove the material sticking to the tuyere.

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